

THE HEAD:  
ITS RELATION TO THE BODY  
IN  
HEALTH AND DISEASE.

AND  
HYGIENIC TREATMENT FOR THE MAINTENANCE AND RESTORATION OF  
HEALTH, CHIEFLY BY WATER, IN CONNECTION  
WITH DIET AND HABITS;  
HEAD, FOOT, AND HAND BATHING IN SECURING SOUND  
SLEEP, ETC.

BY ARCHIBALD HUNTER,  
*Bridge of Allan Hydropathic Establishment.*

*FOURTH THOUSAND.*

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# THE HEAD: ITS RELATION TO THE BODY.

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## I.

HAVING, for upwards of thirty years, been engaged in investigating the Causes and Symptoms of Disease and Ill-Health, while treating cases of every description by means of Hydro-pathy, or Water Cure, which embraces the whole range of Hygienic or Health influences, including purity of air, proper food, active habits, purification of the fluids and tissues by water, in its various conditions, from ice to vapour, &c., I have been more and more impressed by the important position occupied by the Head in its relation to the Body, and in its indications and influence in health and disease.

The Head and Face obviously present to us symptoms in expression indicative of the condition, physical and mental, of the individual, and we readily draw many observations and inferences from even a superficial study. But more minute attention to this ruling organ reveals other signs of great value to the physician, in reference to *causes*, *symptoms*, and *warnings* of impending danger, which, in connection with Hydropathic agencies, enables us to avert and remove many diseases in their first stages, during which they may be incubating for hours or days in the head before manifestation in the body, as in the case of fevers, and more especially in many forms of brain

disease, which give us due warning for months or years before a *critical* or *acute* attack takes place.

From the *Head*, sensation and power are conveyed to every organ and function of the body. This fact directs the first and chief consideration to the brain, or nerve-seat, in disease, although its manifestation may be chiefly visible in some distant part, or other organ. A slight observation on the part of any intelligent person may confirm this, from seeing the effects of many, if not all, of our actions and sensations of our life's duties, pursuits, and pleasures, in their influences on the head.

A hot head, frequently accompanied by cold feet, precedes and indicates the first approach of many diseases, warning us of danger, at a stage in which it may be easily prevented or modified, by *cooling the head* and *warming the feet*. Physicians have had their attention drawn to these premonitory symptoms several days before an attack of fever; and have frequently checked the disease by *depletion* of the system, by means of purgation, and the application of leeches to the head. But this system is open to several objections, as the poisoned or morbid condition of the blood remains unchanged, and the fever is apt to return and break out again with increased violence—in a weakened constitution, with, it may be, fatal results; whereas, with the cooling and purifying agencies of *water*, *spare diet*, or even total abstinence for some twelve to thirty-six hours, a more effectual check can be attained, with increase of strength instead of weakness.

Blood-poisoning, whether from infection through inhalation by the lungs, or absorption into wounds, or bites from serpent or rabid animal, is conveyed by the venous circulation into the heart and lungs before it becomes vitalized; after which it returns to the first receptacles, and carries with it deleterious influences more or less through the whole body.

We know that narcotic poisons, such as *opium*, *tobacco*, and many other drugs, even *quinine*, act chiefly on and through the



brain or nervous system. Chloroform, and other anæsthetics, lull the senses and nerves to sleep before they affect the heart, on which their chief influence is supposed to act. One observation may be made in passing from this subject, that in all cases of poisoning, whether by inhalation or absorption, Life, or the vital principle, seeks for the most suitable means of neutralising the baneful effects, and of expelling the obnoxious substance, either by vomiting, purging, sweating, or even in seeking rest in sleep, by emanation of the poison through the lungs in breathing.

We may learn a lesson from these indications in discovering which organ is the most suitable or appropriate by means of which we can expel elements dangerous to health, while drawing upon *all* the excretory and emanating organs to expel the poison or impurity as speedily as possible.

Alcoholic liquors, in proportion to the amount of the intoxicating element, are especially injurious to the brain. Instances of their deteriorating effects are but too familiar to us all, and the question of how best to counteract the danger to society—by prevention, as well as the cure of those who have become ensnared in the tempter's toils—has engaged the anxious consideration of all those who are interested in humanity.

As a simple assistant or adjunct to the good work, I strongly advocate the agency of water. To allay the insatiable thirst created by stimulating drinks, there is nothing so satisfying as pure, cold water. It enables the drinker who is disposed to free himself from the enchanting cup, to dispense more and more easily, after every draught, with the deceitful beverage, which increases the craving for its Tantalus-like pleasures, which end only in the destruction of its victim. But there are many other ways of enlisting water in the good work.

Head-bathing, frequent and continuous, from five to ten minutes, cold, or with the chill off, up to 90°, is most efficacious in strengthening the nerves of both the *head* and *stomach*.

Olive oil with sweet milk, one teaspoonful of each, is very soothing to the irritated stomach-nerves. Wearing a fourfold compress of wet towelling over the stomach is also very efficacious in overcoming the craving for stimulants.

Another crying evil of the times, affecting both the activities and the mentality of the age, arises from the *too early and inordinate use of tobacco*. Smoking stunts the youth and disposes to indolence. All sensuous indulgences absorb vitality, and lessen the enjoyability of other pleasures in life. Observe the confirmed smoker ; his indifference to intellectual and social pleasures. He can enjoy his pipe or cigar *alone* for hours ; or in semi-absorbed dreaming, with a few others of similar habits. But the serious feature of this indulgence lies in the premature decay of the mind and senses ; as also of the walking or locomotive powers, with failure of sight and memory. I have induced several individuals to abandon this habit, even in advanced life, with partial recovery of their failing powers, and with the certainty of a more lengthened enjoyment of life in duration with satisfaction and pleasure.

Dr. F. H. Daly, in *Gentleman's Magazine*, says :—" I have met with some strange instances of bondage to tobacco. A city man that I know gets half an hour for his luncheon or dinner in the middle of the day, but he manages to eat a few biscuits during office hours, and spends his half hour walking up and down one of the quays smoking. This man walks to the city every morning from his home, the distance being three miles ; he also walks home every evening ; and he smokes incessantly during the walk each way. He dines at six o'clock, and then smokes without ceasing until bed-time. On Sunday he smokes all day, except during meals ; he will never attend a place of worship, because it would curtail his smoking. He will never go into society with his wife, and indeed, will not readily talk to her at home, as it disturbs his smoking. In all other respects this man is a good husband and father. An-



other acquaintance of mine, who is a highly-intellectual and deeply-read man, will tolerate nothing that will postpone his smoke. At dinner he is in a perpetual drive to get done, so as to begin his pipe ; he wants no pudding, cheese, or dessert ; taking these would involve loss of time, and put off the smoking period a few minutes longer. He likewise requires no tea or supper, protesting he is not hungry, and that he does not wish to be disturbed in his smoke. Another man that I know is in a Government office, and when the usual public holidays occur, such as the Queen's Birthday, his treat is to lie in bed all day and smoke. The gentleman is married, and always smokes his last pipe in bed."

*Opium*, in its various forms, whether used medicinally or for sensuous gratification—and even over-indulgence in the use of *tea*—have somewhat of the same effects, which may be overcome by the persevering application of the same means used in the previous case. But these various influences will, in all cases, be greatly assisted by the agency of *sweatings*, whether by means of Turkish baths, or through active exercise, or by any other available appliances. Vegetarian food, and change of scene and society, occupying the mind with social enjoyment, as with music, books, &c., will be found good auxiliaries.

For the attainment, also, of sound sleep, cold head-bathing along with warm foot-bath at 100° for fifteen to thirty minutes, if the feet are cold or even cool, is often a simple and most effectual remedy, and may be continued, night after night as required. Frequent head-bathing assists materially in removing the effects of all these narcotic and nervine influences, and lessens the difficulty experienced in overcoming them entirely.

The *Head*, as the embodiment of the *Mind*, possesses a threefold function, or position, in regard to life and its duties—first, as the centre or controlling power of the physical organs ; second, as the seat of the senses, or perceptions, which place us in connection with Nature, or the outside world ;

third, as the seat of our reflective and rational qualities, by which man becomes "lord of creation," capable of examining and criticising himself and the external universe, recalling the infinity of the past, perceiving the purposes of the present, and anticipating the prospects of the future ;—appreciating the beauty of these eternal relations, with their connection with himself and his Creator or Origin, divining His purposes, while discovering His wise and inflexible laws, in conforming to which we may live in the enjoyment of a degree of happiness limited only by our *increasable* capacity, or observing in our daily experiences that the violation of these laws inevitably brings, as its outcome, corresponding bitterness or misery in punishment.

We may well appreciate the importance of the Head in relation to the body, seeing that all our powers in life depend upon its integrity—its health ; and, in this mental age, in which, from the advance of science in mechanism, physics, and metaphysics, or the boundless field opened up to us in the region of *Thought*—in the unlimited search after the intention, causation, and prospects, both in the universe of *Matter* and the universe of *Mind*—we may pause, filled with awe at the sublime grandeur of the scene, and those admirably fitted organs by which we reach to these heights of knowledge ; while we are careful to value the importance of these physical means, and to strengthen and economise their powers of endurance, so as to acquire and apply, as much as possible, of the boundless stores of mental wealth which are placed within our reach.

The various sciences of geology and astronomy, physiology and philosophy, when pursued with regard to the grand question of man's place, present purpose, and ultimate destination, in the plan of creation, would, when considered thoughtfully and reverently, draw the mind into higher and more satisfactory pursuits and pleasures than those which so generally engross the time and attention of the classes whose position in

society affords leisure to follow out their thirst after happiness, in a life of excitement and sensuous enjoyment, which must cease with our *probationary* and *temporary* sojourn, during this brief period of our endless existence.

We dwell on these subjects with the view of impressing the importance of the well-being of the Head and Brain, which, of necessity, for its high uses, must be delicately formed and adjusted to perform such wonderful functions.

An Italian in his 116th year, being asked the means of his living so long, replied with that improvisation for which his country is remarkable :

“ When hungry, of plain food I eat,  
And dry and warm I keep my feet ;  
I screen my head from sun and rain,  
And let few cares perplex my brain.”

The following is about the best theory of the matter : Every man is born with a certain stock of vitality, which cannot be increased, but may be husbanded. With this stock he may live fast or slow—may live extensively or intensively—may draw his little amount of life over a large space, or narrow it into a concentrated one ; but when his stock is exhausted, he has no more. He who lives extensively—who drinks pure water, avoids all inflammatory diseases, exercises sufficiently, but not too laboriously, indulges no exhausting passions, feeds on no exciting material, pursues no debilitating pleasures, avoids all laborious and protracted study, preserves an easy mind, and thus husbands his quantum of vitality—will live considerably longer than he otherwise would do, because he lives slow ; while he, on the other hand, who lives intensively—who beverages himself on liquors and wines, exposes himself to inflammatory diseases, or causes that produce them, labours beyond his strength, visits exciting scenes, and indulges exhausting passions, lives on stimulating and highly-seasoned food—is always debilitated by his pleasures.



“I will tell you what is ten times, and Ten Thousand Times, more terrible than War,—Outraged Nature. She kills, and kills, and is never tired of killing, till she has taught man the terrible lesson he is so slow to learn, that Nature is only conquered by obeying her. . . . Man has his courtesies of War, he spares the woman and the child. But Nature is fierce when she is offended, as she is bounteous and kind when she is obeyed. She spares neither woman nor child. She has no pity; for some awful, but most good reason, she is not allowed to have any pity. Silently she strikes the sleeping child, with as little remorse as she would strike the strong man,—with the musket or the pickaxe in his hand. Ah, would to God that some man had the pictorial eloquence to put before the mothers of England the mass of preventable suffering, the mass of preventable agony of mind and body, which exists in England year after year.”—*Kingsley*.

To assist in understanding the physical structure of the Brain, in its formation and action, through the nerves, in connection with, and its influence upon the various organs and functions of the body, we may describe the brain, in *appearance*, as a pulpy, soft mass of uniform substance, seemingly without any marked divisions, blood vessels, or tissues, such as we find in other parts of the body. But, as described by skilful anatomists, it is made up of numerous folds or convolutions, separated by very fine skin or membrane, and permeated throughout by minute, delicate blood vessels and nerves. As they advance from the neck to the upper part of the head, the arterial vessels divide into hairlike *capillaries*, where they meet and join the veins or return blood vessels, which are equally minute, and converge again into larger.

In illustration of its important functions, the brain is supplied with more than double the amount of blood, in proportion to its own bulk, than any other part of the body. But from being confined within the hard, comparatively unyielding,

bone of the skull, any extra pressure of blood is so rapid that the small vessels become *gorged*, *congested*, and often burst or effuse serum. This happens under any violent physical exertion, mental excitement, strong emotion, or outburst of violent temper ; and in youth is apt to induce hydrocephalus, or water in the brain ; in mature or advanced age, apoplexy, brain fever, &c.

A striking illustration of the hidden action of the brain under various influences was observed, during a considerable period, in an hospital, some years ago. A young girl had received injury to the skull, which did not affect either the brain or the strong coverings of tough membrane beneath. When sound asleep the soft, pulpy mass shrank slightly *beneath* the level of an opening—where a portion of the skull had been removed—leaving the soft covering exposed to the extent of about three inches. But when restless, as in dreams or from other causes, the brain rose slightly *above* the opening with a quivering motion ; when awakened, it instantly swelled up considerably ; and if excited in speaking or roused into action, by passion, the protruding mass seemed in danger of bursting.

This valuable lesson enables us to understand the effect on the brain of emotion, over-action, or passion upon this most important organ of our system, and shows us how the mental and physical re-act upon each other.

An ingenious instrument has been invented by a Dr. Mosso, of Turin, by means of which he is able to show the approximate amount of nerve-power and blood circulation which is required by any person when engaged in mental work. It was exhibited in London in 1876, and impressions were made of the effects of any mental act, such as reading, speaking, calculating, &c., and even when dreaming. This instrument does not quite divine the thought, but it goes very near it. It consists of a case round the arm filled with water, and communicating with



capillary tubes. As the heart pumps the blood through the arm the water in the tubes rises and falls perceptibly, as in a steam guage, according as the quantity of blood in the arm increases or decreases. In efforts of the brain the blood goes to that organ, and it is the amount of blood which goes there that determines the intensity of the effort. This blood is abstracted from the arm, among other parts, and the depression of the water in the tube increases accordingly. These variations are transmitted to an indicator. M. Mosso asked a gentleman to multiply 267 by 8. He had left school some time, and the effect on the tube was alarming. A literary gentleman who was under the impression that he read Latin and Greek with equal facility was at once disillusioned ; and the same instrument applied to schoolboys will, no doubt, result, if not in abolishing competitive examinations, at least in checking the results arrived at by the examiners.

I had a lady under treatment for deafness, who heard sounds tolerably distinct, when moving about the house in the quietude of her household duties : but, the moment the door-bell rang, hearing ceased for some time, leaving her confused, and quite unable to receive visitors with her usual self-possession.

Frequent cases occur of noises or booming in the ear, continuous, or varying with every pulsation. The person is generally conscious of being free of the noise when asleep, but it returns on awakening.

All these symptoms of more or less pressure on the organs of hearing, can generally be relieved by judicious head-bathing ; and they all demonstrate the condition of over-action and weakness of the blood-vessels with a degree of congestion.

Seeing *double* is another alarming symptom demanding immediate attention to relieve pressure, by cooling the head by continuous and repeated bathing.

The front and larger half of our brain is engaged in the functions of our senses, and embrace our perceptive and reflec-

tive organs ; while the back part is connected more with the involuntary functions—as the heart, lungs, stomach, &c.—maintaining life's physical power while we are awake or asleep. But my object is chiefly to draw attention to the importance of the Head and Brain in relation to the influence exercised in it and by it on and over all parts and functions of the body, and to suggest *various means* for preserving and strengthening this organ, and through it preserve the integrity of the whole individual as an embodiment of physical, mental, and spiritual life for *use*.

“The power which rules the universe uses pain as a signal of danger. Just, generous, and kind Nature never strikes a foul blow ; never attacks us behind our backs, never digs pitfalls or lays ambuscades, never wears a smile upon her face when there is vengeance in her heart. Patiently she teaches us her laws, plainly she writes her warnings, tenderly she graduates their force. Long before the fierce red danger-light of pain is flashed, she pleads with us—as though for her own sake, not ours—to be merciful to ourselves and to each other. She makes the over-worked brain to wander from the subject of its labours. She turns the over-indulged body against the delights of yesterday. These are her caution signals “go slow.” She stands in the filthy courts and alleys that we pass daily, and beckons us to enter and realise with our senses what we allow to exist in the midst of the culture of which we brag. And what do we do for ourselves? We ply whip and spur on the jaded brain as though it were a jibing horse ; force it back into the road which leads to madness, and go on full gallop. We drug the rebellious body with stimulants, we hide the signal and think we have escaped the danger, and are very festive before night ! At last, having broken Nature's laws, and disregarded her warnings, forth she comes—colours flying—right in front ! to punish us. Then we go down on our knees, and whimper about it having pleased God Almighty to send

this affliction upon us, and we pray Him to work a miracle in order to reverse the natural consequences of our disobedience, or save us from the trouble of doing our duty ! In other words, we put our finger in the fire, and beg that it may not hurt.

“ Sometimes we acknowledge our transgression and kiss the rod. We have been taking too much out of ourselves, and will go abroad for a month. We torment ourselves with sudden abstinence for a week, and then rush away as recklessly as before.”

Man may be considered under the threefold division of functions or organs,—First, The Head, the seat of the brain, nerves, and senses—the Life : Second, The Chest, including the heart, lungs, and vocal organs : Third, The lower or digestive organs, including the stomach, liver, and bowels, embracing the generative or reproductive organs, which come last to maturity. Man may be compared to the plant or tree, at first inverted ; as the head, ever responding to the root, in which is the life of the plant, in man receives his life from above, and till birth occupies the same position as the plant, viz., with the feet, or the branches above, and the arms coiled up below. But at birth he is raised to his true position, erect, and looking upward to his true home and destination, with all his organs and functions *beneath* indicating his mission to use, *control*, and *govern* them, by his life flowing into and through the brain to the chest, stomach, bowels, and, finally, the generative organs, that he may give forth his own perfected life, and perpetuate an improved embodiment of man in humanity, which may at last attain the angelic or divine.

The spine contains the substance commonly termed “marrow,” but which is evidently a continuation of the brain, and serving the same purposes, as nerves radiating from it to various organs continue to act even when the brain is injured ; but separate parts of these wonderful organs have different duties



or functions in conveying intimation to and from every part of our wonderful mechanism through the connecting nerves. I allude to the spine as requiring somewhat similar attention and treatment as we indicate to the head. The base of the brain and the spine are generally described as embodying and supplying nerve-power to involuntary organs—the breathing, digestive, and locomotive processes, etc. ; but I only here mention some available means of assisting them, both for direct benefit, and to relieve the head, as by abstraction of excess of heat in the spine or head, we find that we indirectly relieve the head ; and with enfeebled vitality, as from age or other conditions of debility, we can restore vigour and animation to several organs by means of warmth and moisture applied to the spine, or to more or less of the back, and even the head when it is cold.

Nature in all its departments of animal life, instinctively craves for warmth when exhausted or feeble, as the counterpart of the comfort and refreshment from the cooling processes when suffering from excess, as from excessive action in fever or inflammation, etc.

Maintenance of the equilibrium of the heat standard,  $98^{\circ}$ , is one of the most important objects to be desired in all conditions—in health to be maintained, and in disease to be restored.

In treating of what at first sight may seem but a simple *fragmentary* or partial branch of the grand subject of health of mind and body, we find, as the apostle says, that although the head, the heart, and the hands are all different members of the same body, still they are one in action, one in sympathy—each once suffering with the other. With this in view, we can understand how that the chief cause of ill-health and suffering is the unequal exercise—unequal use—or disease of one or several organs.

I cannot do better than quote the opinion of our great modern philosopher, Thomas Carlyle, on the importance, and

even the sacredness, of work. In one place he says : "Genuine work alone, what thou workest faithfully, that is eternal as the Almighty Founder and World-Builder Himself." In another place he says, "There is endless hope in work." In another, "All work, even cotton-spinning, is noble. Work is alone noble." Another passage from Carlyle is to this effect : "For there is a perennial nobleness, and even sacredness, in work. Were he never so benighted, forgetful of his high calling, there is always hope in a man that actually and earnestly works ; in idleness alone is there perpetual despair. Work, never so mammonish, mean, is in communication with nature ; the real desire to get work done will itself lead one more and more to truth, to nature's appointments and regulations, which are truth. The latest gospel in this world is, 'Know thy work and do it.' Know thyself. Long enough has that poor self of thine tormented thee ; thou wilt never get to know it, I believe. Think it not thy business thus of knowing thyself. Thou art an ennobled individual ; know what thou canst work at, and work at it like a Hercules ; that will be thy better plan. It has been written, 'An endless significance lies in work ;' a man perfects himself by working."

*Use* or usefulness is the *end* of life ; indolence and luxury are equally injurious to the individual and society, as excessive labour, with its exhausting effects on mind and body, prevents him from attaining his proper position in life. Such observations justify me in these strongly expressed views on the duty which enters into and underlies the happiness of all ages, but especially of this hard living, hard thinking age. Head and heart must work in unison and together for a purpose, which is the attainment and possession of happiness in this life and the next. God created both man and woman to be happy ; but their happiness is only attainable by obedience to His inflexible laws written *on* and *in* our constitution and nature—physical, mental, and spiritual. The individual qualities of



both sexes are required to act in harmonious conjunction before the happiness and usefulness of *each* can be secured through the varying conditions of health and sickness, joy and sorrow, parting and meeting, through life and beyond the grave.

William Cullen Bryant, the American "poet-journalist," who died the other day in New York from the effects of a fall which produced concussion of the brain, is reported to have been one of the most active old men ever known. At seventy-three years of age he could leap into the air, catch at the bough of a tree, hang by one hand, and then swing himself along it "like a very boy." He was slight of body and limb, and could walk many a stronger man off his legs. He did not walk rapidly, but never seemed to tire; was "wiry" as an Indian, and capable of undergoing an immense amount of continuous exertion. He attributed his marvellous health and agility to his prudent mode of living. He rose about five o'clock in the morning, and worked with dumb-bells, a horizontal bar and a pole, for a full hour, occasionally diversifying his exercises by swinging a light chair round his head. He then bathed and had a light breakfast of oatmeal cakes, milk, and fruit. After breakfast he occupied himself for a while with his studies, and then walked to his newspaper office, a distance of three miles, transacted his business, and walked back again, whatever the weather might be. He worked upon his farm or in his garden in the afternoon, dined early, eating meat only once a-day, and living principally upon fruit and vegetables. He seldom drank any wine, never smoked tobacco, avoided in the evening every kind of literary occupation which tasked his faculties, such as composition, even to the writing of letters, and retired to rest at ten o'clock, or sometimes earlier. His life was, in fact, a long course of "training," and but for the accident which caused his death at 84, he would probably have become a "veritable centenarian."

Civilisation and city life in its artificial habits, as distin-

guished from the husbandry and pastoral life of primitive times, are the chief causes of head diseases, generation after generation following the same overstraining mental habits and increasing the danger and liability to brain and nerve diseases. But I feel that to follow out the details of the many evils resulting from influences acting *on* and beginning *with* the brain or head, embraces the whole history and life of mankind.

Over-action of the brain is equivalent to living too fast, and it is more important to point out and guard against the causes of injury or disease, since it is not always possible to effect a cure after injury. I shall therefore mention several influences which affect the head, beginning with infancy. I may even anticipate that event, as pre-natal influences convey or impress in a powerful degree the temporary and habitual mental or physical conditions of the parents on or in their children. George Combe, in his valuable work, "The Constitution of Man," illustrates this law forcibly by various cases and observations in physical and mental life. Man, by living in communities, cannot avoid influencing all around him, more or less, for good or evil. What Horace Bushnell terms "our unspoken teaching," or unconscious influence, leaves strong impressions on our associates in daily life.

But, returning to the influences in infancy, we may note, as the first duty of mothers and nurses, the importance of washing the child's head *daily* with cold water, or at least, not above *milk warm*, observing at the same time that the feet are comfortably warm.

Teething is usually the first physical strain which affects the head and nerves. The digestion is then impeded and these functions generally are more or less out of order at this period. Nature seeks to find relief by purging, and the stomach being enfeebled by the heavy strain on the head, must not be overwrought by receiving more food than is absolutely necessary, as until the tooth appears the hot head and mouth show weak

digestion, and food will only produce fermentation, generating gases or flatulence, colic, and further purging. But with care in the matter of diet, relief will readily be obtained again and again during the process of teething by frequent bathing or sponging the head—*always* remembering to keep the feet warm, and if feverish, to wear a small wet bandage, with dry flannel above, all round over the stomach, renewed in from one to four hours, or when *hot* or *dry*.

From infancy to school period, children are subject to many accidents, such as tumbles, or blows on the head. Restorative energy is strong in youth, and the effects are seldom severe; yet these may be alleviated, and more serious after-results prevented by frequent tepid bathings, and the application of several folds of soft, wet towelling to the injured part. Such applications will generally prevent even discoloration, by abstracting the surplus heat, and softening the bruised and swollen vessels. But any injury giving a shock to the general system, should be followed as soon as possible by continuous *head-bathing*, as the strain of all suffering or injury affects this organ more or less, and the serious effects of injury to the brain have frequently not been observed till after the lapse of some months.

Daily head-bathings strengthen the head to endure and resist hurtful influences, and, with these convenient means, the mother may modify many accidents, and prevent ailments arising from them in this organ by removing the effects at the time.

With school-days come other conditions and sources of danger. From the importance now attached to the education of our youth, especially since the new code of imperative education LAW has come into force, over-much emulation and anxiety on the part of pupil and teacher have developed an alarming increase of various forms of head ailments. Many children, with nervous organisation and active brain, have



been seriously injured, and not a few have been carried off while in the midst of their work. Sensible parents have rebelled against this overstrain on the health of their children ; but, in many cases, the evil is not seen until too late. The mental powers are cultivated at the expense of the physical, which may bear the undue exertion for a period, but will break down or wear out, often as the much-coveted prize of success is attained, leaving the pupil nought but empty honours and a broken constitution, and, it may be, an enfeebled mind. I have seen many cases of permanent injury, premature decay, and even early death, resulting from this mistaken and misleading mode of education.

The danger to the interests of society are serious, and the utmost care must be taken to prevent or modify the evils resulting from the present system. The impetuous, anxious pupil must be restrained ; while the sluggish and indolent are being stimulated to healthy exertion. Physical exercise, in well-regulated gymnasiums, affords a safe outlet to the former class, while judicious commendation and emulation may be used in spurring on the latter, who too often are neglected that the more promising pupils may have every assistance to reach the prize, and enhance the high-standing of the teacher. But the condition of all will be much improved, both for present and future prospects, by frequent head-bathing. A daily morning bath to the whole body is beneficial to all the organs ; but the head especially requires daily bathing while undergoing any continuous strain, or over-action. This is still more requisite at the time of mental and physical development, as the increased action evolves more heat in the head, which is removed by the cooling application of water, either by sponging or bathing.

“ Mr. George Collier, the coroner for the Eastern Division of Middlesex, held an inquiry at the Red Lion, Mile-End, London, touching the death of Arthur Vincent Bird, aged three

years and ten months, lately residing with his parents at 41 Spencer Street, Mile-End. The evidence of the mother went to show that the deceased had always enjoyed good health up to the day he was taken ill, and diarrhœa set in on the same night. She went to a doctor and obtained some medicine for him, but at 3 A.M. the next morning, he was very much worse, and expired before a medical man could see him. It appeared that the deceased was very fond of school, and was a most excitable child; and he was delirious some time before his death, and was continually talking of his lessons and sums. Dr. A. M. Champneys, of Hanbury Street, saw the deceased after death, and judging from the evidence and his general appearance, witness was of opinion that death was due to congestion of the brain, brought on by over-study. The jury returned a verdict accordingly."

"Christian Heinecker was born at Lubeck on the 6th of February, 1721. When only ten months old he could repeat every word that was said to him; at twelve months, he knew the principal events in the Pentateuch by heart; at two years, he learned the historical parts of the Old and New Testaments; in his third year, he could reply to most questions on universal history and geography, and in the same year learned to speak Latin and French; in his fourth year, he employed himself in the study of religion and the history of the Church. The King of Denmark wished to see this wonderful child; so he was taken to Copenhagen, there examined before the Court, and proclaimed to be a wonder. On his return home, learned to write; but, his constitution being weak, he shortly afterwards fell ill. He died on the 27th of June, 1725. *Life only in the Brain.*"

In addition to the regular morning bath, it will be found exceedingly refreshing to repeat the head-bathing after the duties of the day are over. This will soothe the excited nerves, and give general tone to the whole system. strengthen-



ing the brain, and inducing sound sleep—creating mental material for a new day's work. A summary of essentials may be given as follows :—Good digestion and sound sleep embrace all other requisites ; while deep breathing and active motion are the outgoings of health and life. With lassitude, indigestion, want of appetite and sound sleep, headache, and cold feet, prompt measures should be taken to prevent permanent injury to the head. A partial or entire cessation of school-work may, for a time, be necessary : and no parent or guardian ought to neglect these indications of over-mental strain.

Our schools are now so generally under careful supervision, that the previous danger of impure air and imperfect ventilation is considerably lessened : but in the school-room and dormitories of many first-class buildings, care is not always taken to see that the ventilating appliances are in regular use, and not neglected in practice. Pure air is the first element of life ; and both teachers and preachers, whilst straining their utmost to elevate and instruct their flocks, have often overlooked this first lesson in the laws of life and health. Law is imperative, and takes no apologies or evasions at any time. Learn, obey, and live ; the soul, or individual, that sinneth—*disobeys*—shall die prematurely, if not instantly.

Pure air is an essential of pure blood, and pure blood makes stout nerves ; consequently, pure air which makes the good blood is an essential of the nervous system. Good nerves ensure good digestion ; therefore pure air, which makes the nerves good, is an essential of the digestive functions. Good digestion makes good blood, which brings us to our starting-point, and proves that pure air is the first element in animal existence. From the cradle to the grave we breathe every moment, working and sleeping. Pure living air, therefore, we require every instant. Bad air is a blood poisoner. Air once passed through the lungs is poisonous. It is not only deprived

of its living and life-giving constituents, but it is loaded with impurities, especially when expired by unhealthy subjects. Fever and malaria come always from poisoned air. There may be no worse poison than the poison emanating from the skins and lungs of a mass of human beings. If, therefore, you would escape "blood-poisoning," have constant free ventilation.

Amongst my earliest patients I had a teacher, suffering from long confinement among a large assemblage of children of the poorer classes—not over cleanly either in person or clothing. He was distracted by almost constant headache, but after a few weeks' attention to his head-bathing several times in the day, and especially after his classes, he was completely cured, and is still now, after upwards of thirty years' service in his arduous vocation, in the enjoyment of vigorous health. Clergymen, also, after prolonged earnest preaching in close halls, have been speedily relieved by head-bathing, and a cold foot-bath for ten minutes.

When the blood is deprived of pure air, in breathing a close atmosphere, the first evidence of injury is felt in the head, as the perceptive organs receive and require the fullest measure of blood. This explains the headache induced by prolonged examination of picture galleries, museums, oratorios, etc., the senses of seeing and hearing being overstrained by the unusual attention required. Heaviness, stupor, and sleepiness are the results. Note the condition of many of our Sunday congregations towards the close of the service ; also the heavy strain upon the exhausted preacher.

Breathing noxious fumes or gases during sleep frequently causes death, when the air is deprived of its vital principle, affecting first the head or nerve centre, which controls the heart, and through it deprives the latter organ of sensation and power. Let all sleeping-rooms be well ventilated, leaving the upper sash of the window open from one to four inches, according to the weather, while avoiding draughts.

*Business*, or professional life's duties, in this stage of the world's history, involves great strain on the brain. Society apologises for itself in saying that we are all compelled to push on, as others are doing the same in the race for riches or station, or life's comforts ; and if we do not strive with all our powers we are left behind. This race, what is the end of it ? Securing to ourselves as many of the comforts and luxuries of life from the labours of others, as we can procure, with the smallest amount of our own.

Were each individual in society to acquire by his own manual labour alone, all that he fancies requisite to comfort, how limited would be our possessions ! But whatever we possess beyond what we have produced, or for which we have given some equivalent, has been produced by the labours of others, to whom we are indebted, in proportion to what we have received from them. By the skill and industry of our predecessors, we possess houses and many other elements of convenience and luxury, by labour-saving machinery, etc., which brings within the reach of all classes many otherwise unattainable comforts. But, on looking around us in our homes, we may be surprised to find how much we are still indebted to our neighbours, and we may well consider, if we are not drawing too much upon the labours of our fellow-men and women in comparison to what we are doing for them. How far are we from acting on our Lord's harmonic teaching !—that it is more blessed to *give* than to *receive*—"Give, and it shall be given to you, and with the same measure with which ye mete, it shall be measured to you again." Unused health-power, or possessions, are dangerous, and involve great responsibility to their owner ; but in the race after riches, many are pursuing a phantom to their own ruin of health in this life, and poverty in the life to come. Only the desire to do good to others can maintain our integrity of mind and spirit in the accumulation of wealth. And this high principle will, from its very nature,



modify and restrain within wholesome limits, the exciting and absorbing pursuit, since we cannot do good for others without benefitting ourselves.

Life, in its many aspects or objects, uses, and enjoyments, is a Divine gift, opening out to us infinite capabilities, though circumscribed by inflexible laws. With attention to those laws, we may, with few exceptions, maintain our health of mind and body to a lengthened period in usefulness and enjoyment beyond the conception of the many who seek to live for themselves, and who lose the very pleasures they are pursuing. What we give to others is doubly our own.

Dr. Richardson says that the body should be in its best physical condition at forty years ; for thirty years after, the organisation should become more perfect ; at seventy, old age should begin and last for fifteen years ; when from eighty-five to one hundred there should be ripe old age, without disease or pain, but marked by a general subsidence of the vital functions. This is his ideal limit of life where nature has its undisturbed course.

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## II.

### SLEEP AS A RESTORATIVE OF BRAIN POWER.

THE necessity for sleep, to enable the involuntary organs to repair or restore the tear and wear resulting from active life, is chiefly felt by the head ; and the desire for sleep should be gratified, if possible, *always* when felt. In proportion to the soundness of sleep, we may say that the integrity of the brain and mental powers are maintained. It thus becomes an important consideration to ascertain the best means of attaining sleep by natural influences. Labour, or bodily exercise in some form, is the safest and most effectual sedative ;



various other means which *strengthen* the brain will be also found conducive to this end ; but sleep, and every function of life, is only to be enjoyed in its sweetness by learning and obeying the laws of nature. Solomon tells us that “the sleep of the labouring man is sweet, whether he eat much or little.” The enjoyment of life depends upon the harmonious exercise of our several organs, and, without moderate labour, rest, or sleep and good digestion, we cannot realise the full sweetness of life’s enjoyments.

I have had numerous applications from all classes seeking for help to attain this desirable condition, and have frequently succeeded in the most difficult cases, by adopting some form of head-bathing—sometimes a thorough wash and shampooing, sometimes a mere simple pouring of tepid or cold water by cupfuls over the head from ten minutes to an hour ; following, in some instances, these means by tepid or cold sitting-baths, which, acting as a derivative, draw down the heat, and relieve the suffering head ; a warm foot-bath accompanying this when necessary. Care must be taken to wrap up the patient while in the bath, and to bind the damp hair to the head in a soft silk or woollen covering, to prevent chill. Cold feet is the almost invariable accompaniment of a hot head. By *equalising* the temperature, sleep is most likely to follow.

Prince Bismarck cannot sleep at night. “His old foe insomnia still clings to him. He passes whole nights waking. At morning dawn, slumber, if not sleep, comes at last, but the day finds him weary and unfit for work, yet with mountains of work to get through.”

“The human frame (says Frank Buckland) cannot do without sleep. I believe the reason is that the mysterious property—we call it ‘vital energy’—gradually leaks out during the day. During sleep the machinery of the body, especially the brain, becomes recharged with it. The cause of not being able to sleep—of people in good health, and hard workers with their brains

—is that the brain cannot, so to speak, ‘go down,’ but it continues to act, more or less. Now, tea and coffee, when taken at night, are poison to certain constitutions. It is very well in the morning, but it is very bad at night. The one contains an alkaloid called ‘theine,’ and the other contains an alkaloid called ‘caffeine.’ These, taken into the system, stimulate the brain and do not allow it to go to rest. I speak of this from experience. If I take a cup of tea or coffee in the evening, going to bed about eleven, I cannot sleep, and if the brain does fall asleep, the alkaloid will wake it up in an hour or two.

“All animals go to sleep, if they are not disturbed, after eating. This is especially noticeable in dogs; and the great John Hunter showed by an experiment that digestion went on during sleep more than when the animal was awake and going about. He took two dogs and gave them both the same quantity of food. One of them was then allowed to go to sleep, and the other was taken out hunting. At the end of three or four hours he killed both these dogs. The food in the stomach of the dog which had been asleep was quite digested. In that of the one which had been hunting the food had not been digested at all.

“Dogs, likewise, will sleep at night if they can; cats, I observe, are sleepy in the morning, the reason being that the wretches have been out all night, and, of course, feel very seedy in the morning, and doubtless their heads ache sometimes; and it serves them right if they did, considering the row they make, fighting and caterwauling, for they hold their meetings at the back of my house. All the stray cats in the neighbourhood come here to arrange family matters, and kindly supply me with a fine lot of kittens.

“Opiates in any form, even chlorodyne, will leave traces of their influence the next morning. I therefore prescribe for myself, and have done so for others—onions; simply common onions raw, but onions stewed will do. The taste of onions is

due to a peculiar essential oil contained in this most valuable and healthy root. This oil has, I am sure, highly soporific powers. In my own case they never fail. If I am much pressed with work, and feel I shall not sleep, I eat two or three small onions, and the effect is magical. Onions are excellent things to eat when much exposed to intense cold.

“Finally, if a person cannot sleep, it is because the blood is in his brain, not in his stomach; the remedy, therefore, is obvious: call the blood down from the brain to the stomach.”

“Herbert Spencer is another instance of a great philosopher who, in certain important matters, lacks common sense. He is a bachelor, for early in life he determined to devote himself to scientific pursuits without the encumbrance of a family. He did some marvellously good work in the line of original research and thought; but as he denied himself any recreation, as well as the solace which wife and family would have given him, he became nervous and irritable, and finally could not rest at night. Instead of taking proper hygienic measures to induce sleep, he resorted to drugs, and finally sought relief in doses of chloral. This was twenty years ago, and he made his life miserable thereby. He ought to be in his ripest manhood, instead of which he is a physical wreck, who has no peace by day, and no rest at night. He came to this country vaguely hoping it might do him some good; but he returns home still further debilitated by his journey. Tens of thousands of the people of this country would like to have paid their respects to the great evolutionist; but the poor, haggard, nervous philosopher had to deny himself the pleasure. If Mr. Spencer had abstained from opiates and chloral, and rested a while from his labours, there might have been many years of usefulness before him. But it is a painful fact that the best thing that could happen to him would be a swift and painless death.”—*American Paper*.

We may describe the various modes of treating the Brain or Head by bathing in the various periods of life.



*First*—As a means of strengthening it from infancy to youth, to fit for the duties of life, and guard against various head diseases incident to childhood.

*Second*—When undergoing the strain of school influences while preparing for active life.

*Third*—For maintaining it in vigour, so as to endure through the full period of life, or to extreme old age, without premature decay of the physical or mental powers, preserving both in equal balance till fully ripe for the transition.

*Fourth*—Means of restoration where injury has been received from internal, external, or personal instances, *i.e.*, from the individual habits of life.

*Fifth*—In cases of fracture or concussion, requiring surgical assistance, in which inflammation may be prevented, by the application of moist warmth, in assisting the healing influences, and soothing the general system, by drawing the heat to the surface from the internal organs.

Water has been too little employed in cases of head injuries. Shaving the head and applying *ice* has been frequently resorted to with disastrous effects. These have deterred many from applying water in modified forms. Many cases of hydrocephalous disease ("water on the brain"), fevers with delirium, and apoplexy, are lost for want of this simple agency efficiently applied.

Gentle and continuous applications are at all times to be preferred, being safer and more effectual. Violent remedies should be avoided. Ice is apt to paralyse the brain and nerves even of a person in health. The vital power in disease or after injury is enfeebled, and requires more gentle aid and careful treatment. I have seen immediate relief on removal of the ice-bag, and the substitution of several folds of wet towelling, changed only as they become heated, applying at the



same time *moist* warmth to the feet, by a foot-bath, or hot-wrung flannels. Water applications to the head must, in various forms, become the great remedy in curing both physical and mental head diseases and injuries, furnishing also many methods of strengthening all the organs of the senses, and through them and the brain the mind itself, in this exciting age when the observing and reflecting powers are so heavily taxed by the pursuits of science, philosophy, or commerce. Every hot summer, also, has its records of death or disease from neglect of this simple and available remedy for prevention of sunstroke. Water is within the reach of everyone, and those who have occasion to be under the direct rays of the sun in its strength, should, as a precaution, freely bathe the head twice daily or oftener, and wear some moist covering under the usual head-dress, which should be of light colour. Observe what an effectual protection the turban is with its many folds of soft light fabric, under a burning sun in the East.

A traveller in the Himalayas, found a district where the mothers were in the habit of placing their children under a rill of water flowing on the head through bamboo tubes, under which influence they soon fell asleep. This process had been in use from time immemorial, and was believed to be a sure prevention against sun-strokes in mature life.

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### III.

#### PRACTICAL DIRECTIONS.

As a preventive of injury and means of strengthening the Brain and Head, I propose the habit of bathing it more or less every day, according to the requirements in which the feelings and consciousness of the individual will instruct him after a few trials.

Good soap requires to be used frequently, perhaps every second or third day, as the skin exudes freely and soap is requisite occasionally.

The water may have the chill off according to the season ; but cold, or from  $60^{\circ}$  to  $80^{\circ}$  strengthens both the head and hair.

Long hair in man or woman requires to be bound to the head after bathing, with some thin cover or binder, or a light cap, as damp, chilly, or wet hair is likely to give cold or neuralgia. A thin binder is preferable to one heavy or bulky, and wool or silk better than linen, permitting evaporation.

All women should thoroughly wash the head, at least, once in the week—say, before bed-time, and sponge it freely, or bathe the head under the hair daily, keeping the *long* hair as dry as possible every day when dressing. With dry or scurfy heads, it is very beneficial to rub frequently with olive oil, or some simple pomade, after bathing the head and drying with a towel. The oil is absorbed into the scalp as the hair dries.

Persons subject to much mental strain will find great benefit and immediate relief, and prevention of injury to the brain, by the frequent application of water to the head at any time, if uneasy ; perhaps by simply bathing it for a few seconds at a time or times of strain or over-action, and especially by free bathing of the whole head, face, and hands for several minutes when the work or strain is past. This will act as a mental restorative far beyond the influences of stimulants or tobacco, and fit the individual for some suitable evening occupations and enjoyments, by relieving the brain from the fulness caused by strain during the day, conducing also to sound sleep and restored energy for a new day with comfort and strength.

I again draw attention to the *feet* in conjunction, as a hot or uneasy head is almost always accompanied by cold feet. Warming them at the fire is unsatisfactory. When otherwise suitable, the best restorative is a cold foot-bath, followed by a walk ; but, if this is unsuitable, a *warm* foot-bath—say from

100° to 110°, from ten to thirty minutes—is beneficial and soothing in every respect, especially in the evening when cold or feeble. But reference must also be had to age, and other conditions, in every case. Keeping the feet warm and the head cool secures the comfort of all the organs between the two extremes of the body, and ensures a measure of relief in many forms and symptoms of disease, and should be carefully attended to in every case of illness under whatever name.

Reference has been already made to the conditions under which the soft brain is placed inside its hard-bone covering, as the wise and provident safeguard to preserve it from external injury, seeing how important its functions are to the life of the individual. But when injury has been received, whether from personal or relative misuse, or from internal injury or disease, either inside, or outside of the skull, with increased circulation there is an increase of heat, drying up and retaining the secretions or waste matters, and distending the minute blood-vessels, and weakening their contractile power. Congestion gradually takes place with increased pressure on both blood-vessels, nerves, and skull, which, unless relieved speedily, must cause effusion on the brain—it may be simply water in youth (hydrocephalus), or serum in mature life, causing such an amount of pressure on the brain as will destroy the action of the nerves, supplying some organ or limb with feeling or power, producing paralysis. These results are slow in action, and always give sufficient indication or warning of danger: and, by the intelligent use of the simple aid supplied by water, and the avoidance or removal of the causes, relief can be obtained, and injury prevented. These conditions and other causes, specially in dentition, overstrain, anxiety, temper, passion, or excitement, or one or other of the many causes which—in propelling blood in excess to the brain—induce pressure with heat, causing headache, giddiness, confusion, weak vision and hearing, etc., or stupor after falls and bruises.



## THE HEAD : ITS RELATION TO THE BODY.

There are also many other alarming symptoms, especially in children, such as half-shut eyes when asleep, starting, twitching, and unpleasant dreams, etc. All these signs betray overaction and pressure on the brain ; and, with such indications, frequent and repeated cooling of the head must be persevered with until the symptoms are overcome. As they are likely to return in a lesser degree, it may be sometime before equilibrium of circulation is established, as from relaxation of the minute vessels and nerves they are often reacted upon, and the cooling influences may require continuance for days in childhood, and weeks or months in maturity or advanced age, to effect a cure.

But numerous instances of perfect recovery in cases seemingly hopeless may inspire us with confidence ; and as the means are simple, safe, and agreeable, earnest and patient attention to symptoms, and the means which give relief, with the avoidance of all injurious and exciting influences, the great majority of head ailments may be cured, and the frequent permanent or fatal results, so well known and dreaded, prevented.

*External* injuries to the head, such as are frequently received from falls or blows, must be treated with tepid applications at first, but always under blood-heat—say, at  $90^{\circ}$  to  $95^{\circ}$ . Every case must have discriminate treatment, with attention to such applications, which may be varied to meet every symptom.

Severe injuries to the head affect the internal organisation, and require consideration as to what the effect *within* the brain, from shock or congestion, may have been.

In cases of illness affecting the brain, the digestive functions are suspended, or weakened ; and even when the appetite and digestion are good, great care must be taken in dieting, as the first supplies of blood go most readily to the weaker organs. Spare and simple food is always safest in every severe illness.

After mature life, especially with the comparative rest which is desirable at this period of our existence, we require only



moderate supplies of food, or merely enough to meet the *daily waste*. Whatever is partaken of beyond this necessity, only oppresses the heart and excretory organs, or converts the surplus nutriment into fat, or otherwise disposes of it at the expense of the vital powers.

Special attention is directed to the condition of head and feet as indicators of health in all periods of life.

*First*—In *Infancy* and childhood, regular daily bathing of the whole body is required, but especially of the head, to strengthen the whole nervous system, as the most important and essential organ for action in life.

*Second*—In *Youth* of both sexes, to enable them to acquire sufficient knowledge without injury to the brain, and by conjoining the education, or cultivation, of the physical equally with the mental system.

*Third*—In *Mature* business and professional life, to maintain full vigour through all the strains and trials to which we are subjected; by preventing premature exhaustion or decay, while fulfilling our mission in this world.

*Finally*—In *Advanced Life and Old Age*, to maintain the full enjoyment of life, by preserving the physical and mental powers *up to and beyond the three score and ten*, by frequent *tepid* head-bathing and oil rubbing, with the avoidance of undue strain; and attention all throughout life to the requirements and state of the brain as *the chief seat and organ of life*, while fulfilling what other duties fall to us, we may confidently expect the duration of our earthly existence to be considerably extended, in addition to escaping many of the mental and physical ailments, from premature decay of mind and senses, so frequently conjoined with prolonged life and extreme age—desiring thus, *life, to see good, do good, and enjoy good to the end*.

I have frequently been confirmed in these convictions when inquiring into the habits of many old persons of both sexes, to learn that almost invariably those who were in the practice of daily or frequent head-bathing, were fresh and vigorous in body and mind, in contrast with those who had neglected this simple and agreeable practice.

The advantage of this habit in its effects is somewhat of a substitution for more extended ablutions, which in so many conditions of life are unattainable ; but we must remember that frequent washing and bathing to maintain cleanliness of person, and invigoration of the whole individual, for the various organs, are essential to every one at all ages.

*Consciousness, Sensation, and Comfort*, must be our guides as to frequency, temperature, and continuance in head-bathing.

Simply as a restorative after physical (with or without mental) fatigue or exhaustion, try the influence of tepid or cold head-bathing, and, if suitable, with the addition of a warm foot-bath—say 100° for ten minutes. Food may follow soon after with double benefit—with the feeling of relief, refreshment, and restored strength and animation, infusion of new life, conferring all the benefits of stimulants without any of their injurious after effects.

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#### IV.

### VARIOUS FORMS OF HEAD-BATHING AND APPLIANCES OF WATER.

FIRST, the simple, frequent washing and bathing of the head, as a means of maintaining health and cleanliness, to the most important and controlling organ of the individual, or the body. Doubly important to those who use or cultivate the brain more than the body.

Equal exercise of *all* our organs is best fitted to maintain their integrity as a whole during the full period of life ; but mental work especially requires good brains in a cool head.

*Infancy* and school life require extra attention to head-bathing, giving heed to symptoms, as noted elsewhere, for guides.

*Dipping* the whole head in cold water—say, at 60°—is very agreeable after mental strain or extra fatigue ; or, when unattainable, the whole head may be freely bathed and shampooed with the hand, while using a sponge, for from five to ten minutes.

Simply laying the face in cold water, or with the chill off, from the upper lip to over the brow, for one, two, or up till five minutes, is very refreshing ; and, while allowing free breathing by the mouth, relieves the eyes and nostrils, and cools the forehead, with the perceptive organs of the brain.

When reading, writing, or looking long at white or black objects (as when at white-seam), affecting the eyes, this form of bathing will be found a preventive of injury, and restorative of strength to the sight, while relieving the whole head.

*For Headache*, free bathing of the head by washing and shampooing (which consists in gentle and continuous rubbing, pressing, and manipulating with the fingers and palm of the hand), with alternate changes of temperature, by adding to the water, beginning at 80°, or milk warm, and ending perhaps at 50°, prolonged for from five to fifteen minutes, is most refreshing.

Such operations over a basin, as the best posture, often induces sleep ; when the individual is unable to stoop, the same effects may be produced by sitting comfortably with a towel



round the shoulders, and the head being kept wet by a sponge again and again, while the operator keeps alternately rubbing, sponging, and manipulating with the hands as before described.

Keeping from one to fourfold wet towelling bound round the head for hours or days is very effectual in cooling the brain, while allowing evaporation ; having a thin woollen or silk covering as a binder above.

*Deafness*, and other ailments arising from exposure to cold, are likely to be relieved or cured by these warm washings, if used soon after the attack. Rubbing the whole head and ears also vigorously after-washing is very beneficial in these and many other cases of head ailments. Warm or hot foot-baths taken in connection with these are very beneficial before bed-time.

Tight wet bandages round the head, consisting of from two to six folds narrow wet towelling, about four inches wide, are most agreeable and efficacious in relieving headaches. These may be kept on all night, after a head-wash, and, it may be, a warm foot-bath.

Pouring over the head, either from behind or in front, with the head resting on a cane-seated chair, or on the operator's hand, with tepid or cold water, may be continued for several days in succession, for fifteen minutes, several times daily, in cases of threatened or prolonged diseases of the brain.

Lying with the back of the head in a shallow vessel of water (with the pillow under the shoulders, and a dripping fourfold towel laid over the whole head, and frequently re-wet), say, for twenty minutes, is a powerful remedy in relieving severe cases.

These applications give relief by abstracting internal heat, and loosening the retained and adhesive secretions through the outlets of nostrils, eyes, ears, and even the throat.

Wet bandages, wholly or partially round the head, are very suitable in many cases, as they act gently and continuously.



until dry, when they may be re-wet with a sponge, to avoid the trouble of unfastening them. But all bandages *round* or *on* the head, should be well fastened, or kept close to the head, as loose wet cloths or hair is very apt to give cold or neuralgia.

In cases of feeble action, where the head is cold, as after some shock stunning the brain into temporary paralysis, especially in cases of railway and carriage accidents, falls, or when the person is feeble and aged, or in rheumatic and neuralgic cases, warm water to begin with—as high as blood-heat, 98°—should be employed in bathing the head. Rub and shampoo the head, so as to loosen the secretions by warmth and moisture, after which the hair may be bound up carefully until the natural warmth be restored.

Headache, one of the most common ills, can easily be relieved in five minutes by a prolonged brushing. Dandruff and falling hair, the signs of baldness, can also be prevented or removed by a simple process. A hair brush is charged with “Odic Force.” This force is a form of magnetism, which has produced remarkable cures. By brushing slowly from the forehead back towards the spinal column with one or two brushes the Odic Force is brought into action, eliminating all congestion, relieving the headache, and giving a wonderful stimulus to the hair bulbs and glands.

Shocks, or violent concussions, chiefly affect the nerves and heart action, and the effects are most speedily removed by general or local warm bathing. Moist warmth, both to the *head* and *back*, between the shoulders, by the applications of several folds of flannel, wrung out of hot water, is very efficacious in reviving and animating the feeble.

In every effort we make to restore health to its standard, we must equally seek to remove depression and cold by supplying heat, as frequently as to lower or subdue heat when in excess, as in fevers and cases of inflammation. Observation

and perception will assist in devising a thousand forms and modifications of means to effect relief and cure ; even prevention of disease in the head and body is easily effected, when once attention has been drawn to the influences and power of water in its various forms and degrees in attaining the health standard of vital heat.

Another means of relieving the head, which I term a counterpart, is to be found in the sitting or hip bath. This bath, when cold, acts as a powerful derivative, by abstracting heat from the hips, when either excess of heat and of blood, or degree of excitement, nervous and other forms of over-action, exist in the brain.

Cold sitting baths and foot baths, or with the chill off, according to conditions, may be freely given in connection with head applications. These may be given also, with fresh water added at intervals, while rubbing the spine with the wet hand for hours if needful, in cases of delirium, and other forms of disease.

As an experiment, a person with slight feverish symptoms took a bath of about three gallons of water, at nearly  $50^{\circ}$ , and, after thirty minutes' use, on trying the thermometer, found the temperature raised to about  $80^{\circ}$ . The physician may draw upon this sedative bath with good effects in many cases of head disease and internal congestions.

The cooling is chiefly local, as shown by the firm beat of the pulse ; and the effect is to induce increased circulation to the loins, limbs, and feet for hours afterwards, and in the proportion, relieving the head and chest from oppression and excess.

FOOT BATHING is an aid to SLEEP and a means of relieving both the CHEST and HEAD from over-action and congestion.

Warm ( $95^{\circ}$  to  $100^{\circ}$ ) and hot ( $100^{\circ}$  to  $110^{\circ}$ ) foot-baths have much power in cases of feeble heart-action, and in conditions of exhaustion and cold are wonderfully restorative.

But cold foot-baths are even more efficacious in cases of

sleeplessness and over brain-action, in connection with general warmth and a healthy or quickened pulse. In proportion to the activity of blood-circulation and nerve-action in the feet and limbs, so is the strength and warmth drawn to the feet with proportionate relief and safety to the head and chest.

Take the cold foot-bath *only* when the body is comfortably warm. If used during the day, it is well to take a moderate walk afterwards ; but in the evening one can be taken with much benefit from 15 to 30 minutes at the fireside an hour before bed.

After a day or evening's excitement they are invaluable, being so easily attained without interfering with the dress, or giving the household any trouble.

A few illustrations of their effects will give conviction more fully.

An old lady, in confirmation of my prescription, told her family that when she was a girl of 17, it fell to her turn of duty to tramp the clothes in process of washing,—an old Scotch system in country districts. She was suffering at the time from a severe cold, and thought it would make her worse, but being unable to escape the duty, she went to it in sorrow, with tears in her eyes, expecting an increase of illness, but to her surprise, after plashing in cold water with her feet and limbs all day, when night and rest came her cold was entirely gone.

A clergyman who suffered from headache and nervousness after evening service, having to walk for an hour to regain composure, was induced to bathe his head and take a cold foot-bath in the vestry for 10 to 15 minutes, which soon gave perfect relief, while at the same time strengthening the nerves.

A gentleman who was on the top of an omnibus on the point of being capsized leaped off, but as the distance was considerable he was stunned, and the feet so bruised as to be unable to walk without extreme pain for two months after-



wards, and with heat and uneasy sensations in the feet for upwards of a year. Occasional warm foot-baths and wet bandages all night for some months gave great relief, but by taking a *cold* foot-bath at the fireside in the evenings for half an hour whenever the feet were uneasy, perhaps two or three nights in the week, for nearly two years, the injury was completely removed, while the hard, dry cuticle which formed round the heels gradually dissolved, and the whole skin of the sole was renewed.

But this experiment revealed another wonderful operation or process of nature.

On trying the temperature of the foot-bath with a thermometer in nearly a gallon of water (which only covered the toes), varying from  $45^{\circ}$  to  $50^{\circ}$ , and keeping a rug over the limbs, the sensation of cold soon disappeared, followed by a soothing influence in the feet and all over both the head and chest, enabling him to become absorbed in a book; he tried the thermometer in 15 minutes and found the temperature was  $15^{\circ}$  degrees higher, and generally, after 20 to 30 minutes, up to 20 or 25 degrees, without feeling the least discomfort or cold, but refreshed and strengthened; and after drying and rubbing the feet, they gradually regained full warmth before going to bed.

The effect of this abstraction of heat from the feet or from the upper organs, chiefly from the head and chest, is to restrain the excess of blood-circulation in these, and furnish the feet and limbs with extra supplies, resulting in strength and warmth, and producing sound sleep.

To begin with these baths, which may be repeated two or three times daily, and, if possible, followed by a smart walk, the temperature may be modified until the feet, through the action of the *feet-nerves*, responds more and more freely, and the beneficial effects become confirmed and apparent, in habitual warmth.

Children and young persons especially will be greatly benefited by them, and by walking and running barefoot on the seashore, and on the grass, wet or dry.

No means can be more effectual in preventing the tendency to colds generally, and all chest and head ailments, than this practice in summer and in the country.

The two special effects will be to maintain warmth in the feet and induce sound sleep, and as a counterpart to the influence of head-bathing it can be easily experimented on by any intelligent person in need of such aids.

Another simple means of relieving the head, and even in inducing sleep, consists in bathing the HANDS in cold water. By bathing and rubbing them in and out of the water for from five to ten minutes, the amount of heat abstracted chiefly from the head, and partly from the chest when affected with a cough, is wonderful, and may be repeated again and again, while observing the effects and maintaining comfortable warmth in the body generally.

Hydropathy, as a system, aims at relieving the economy from disease, in equalising the circulation of the blood, by abstracting or lessening the strain on any weak or diseased organ, by means of some simple cooling process elsewhere, with other derivative influences, increasing the circulation to parts where it is deficient by safe stimulation.

I here draw special attention to another prominent cause of illness within our own control, as none has greater influence on, not only head ailments, but disease in general, than our indiscretion in eating and drinking. Weak digestion is often the result of previous errors : it may be in ourselves or our progenitors. But even in these cases much can be done to remove the evil by careful attention to the quality, quantity, and frequency of our supplies of food and drink.

*Excess* is far oftener the cause of illness than *deficiency* ; and even those who suffer from privation too often indulge to ex-

cess when opportunity offers temptation. Our various natural affections are the basis of our temptations, and our great business in life is to control, regulate, and engage these rationally and judiciously so as to fulfil their purposes in being useful.

We must govern our affections, feelings (say appetites) or else they will govern us, and make us their servants—their slaves.

Arbitrary or vindictive punishment is not needed in this admirable universe, which our Creator has so perfectly organised, ordained, that his laws are self-corrective. What is right and good, just and true, brings forth fruits and rewards, in the enjoyment of a conscious rectitude, followed by peace and happiness sooner or later ; while even error, which is correctable (if we are *willing* to learn and obey) inevitably leads to suffering and sorrow.

Our work in pursuing this life-purpose is never completed here. But the desire and effort to attain control and guidance of our affections—of *ourselves*—will have some measure of attainment (gradually increasing) in mental and physical health and consequent happiness, both here and hereafter.

Before dismissing this subject, I may mention that the various effects or fruits of error in diet, such as *flushings, oppression, depression, headache, susceptibility to cold*, also *feverishness* as a *reaction*, with *fevers* of various types, bilious or gastric, and even typhus, with the majority of ailments peculiar to man, and I may say animal life in every creature, begin with and depend on the food habits. Both purgation and constipation in their beginning and progress arise from improper food or excess. In the former, nature, or the vital element, expels it impulsively ; and in the latter, the strength is expended in digesting or in brain work, the bowels meanwhile lying dormant. In many cases 24 or 36 to 48 hours' fasting is the simplest, safest, and most efficacious remedy, besides allowing nature a period of rest, which it takes advantage of in purifying or purging the whole living household of impurities or superfluous materials. The



efficacy of fasting is greatly increased by active habits in outdoor life, and moderate drinking of pure cold water. Simply omitting one of our usual meals, especially breakfast, when the appetite is feeble, or the mouth and tongue dry, in the morning, is very efficacious in relieving and preventing stomach ailments.

Try the process as an exercise of self-denial, and as a strengthener of the mental and spiritual elements of our nature. Periods of fasting have been adopted by philosophers and saints or devotees in all ages as a preparation for any great mission or earnest endeavour after high attainment.

In all periods of man's history, and as an adjunct of all systems of religion, periodic fasts have been enjoined, although frequently evaded in spirit by indulgence in substitutionary articles of diet, or in excesses after the nominal period of restriction.

Man, as a sensuous or animal creature at birth, requires to cast off his lower nature before he can ascend to or acquire and enjoy the higher states of existence which his powers and capabilities place within his reach. His physical body is mortal, but his mental and spiritual may become immortal if he partake of spiritual food. Goodness and truth, as entities and realities, alone are eternal.

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## V.

### ILLUSTRATIVE CASES OF RESTORED HEALTH ATTAINED BY HEAD-BATHING, &c.

A CAPTAIN of a vessel, who was deprived of sleep for some weeks, on reaching port fled to his home, thinking himself pursued by officers of justice as being the cause of a disastrous voyage. He had been shunning society for some weeks,

walking about the apartment day and night, watching every person approaching, in suspicion of being apprehended. I got him, with some difficulty, to submit to repeated head-bathing and foot-baths, the effect of which produced sleep, and in the course of a few weeks he was able to resume his duties.

A gentleman was under the influence of delirium tremens, and his friends had certificates ready for his removal to an asylum. They were induced to try the influence of head-bathing and cold hip-baths for an hour or two, the effect of which was so soothing, that perseverance with these means for a few days completed his restoration to perfect health.

A boy frightened by a large dog leaping upon him, had a fit, which produced complete prostration with deprivation of speech and power, beyond that of swallowing a little food when fed with a spoon. He was restored in a short time by frequent washing and bathing of the head, and cold wet cloths to the spine.

A young lady, who was ambitious of being at the head of her class, on coming home day by day complained of headache, with want of appetite and indifference to food, which rapidly exhausted her strength. She had been confined to bed for several months before I saw her, and was totally unable to stand ; taking very little food, and tormented with headaches and with troubled or imperfect sleep. Many doctors had previously prescribed for her. As the head seemed the seat of the malady, I got it bathed freely ; and with warm foot-baths and attention to diet, a gradual and perfect recovery was gradually attained.

Many cases of a somewhat similar character crowd upon the memory on looking back on the experience of years, impressing me more and more with the importance of attending to head symptoms, such as headache, want of sleep and appetite, accompanied with cold feet, especially when under mental strain, by judicious habitual head bathing.

I have frequently had to advise withdrawal from school for one or two sessions when symptoms of strains manifested themselves, substituting out-door romping and physical exercise to remove the effects of mental exhaustion and debility. Young men entering too earnestly, before maturity, into absorbing business-life have frequently broken down, and required to become boys again for a time, and to strengthen their heads by bathing, etc. ; after which they returned to their work with more caution, learned from bitter experience.

Many students and clergymen have been under my care, suffering from the same causes, on whom similar treatment has proved successful. Recovery from strain, or mental and nervous ailments has been attained by seclusion from scenes of work and excitement alone. What may be termed negative influences are in many cases invaluable. But reference must be had in every case to the producing causes, as both excitement and monotony, under depressing influences, affect the brain injuriously. This is more observed in individuals of energetic habits ; but in all such cases head-bathing is of immense value, as it relieves over-action with pressure or fullness in the one case, and quickens dormant action in the other, and, with the help afforded by water, etc., nature or vitality is strengthened so as to regulate and govern the varied functions which depend on healthy brain and nerve power for performance.

A lady, who had a discussion with her pastor, maintaining her opinions with violence of temper, took an epileptic fit soon after, and was confined to bed for about three years. Medical treatment had been tried in several forms, but permanent debility seemed to be her only prospect. She was about forty years of age, and her digestive organs were irritable and feeble. A relative sent me to see what could be done for her. Head-bathing, and warm-wrung flannels to the stomach, with a wet towel bound tight round the head constantly, were the chief



means used. For some months there was only partial benefit ; but from the soothing effects, and better sleep and digestion which followed these applications, after nearly a year's perseverance, she regained perfect health in every function, to the great surprise of all her friends.

A well-known professor of chemistry in a Scottish university, in pursuit of plans for the purification of rivers, when nearly sixty years of age, became unable to study or write, and even conversation with a friend required him to keep his hand to his brow. Head-bathing gave him great relief : but to assist in securing better sleep, I gave him a double wet night-cap in bed. This was a help so far ; but on awakening when it became dry, he adopted another above the first, and ultimately kept on three wet night-caps for about six months, when he gradually regained the full use of his brain and writing abilities.

A bank inspector was laid aside for three years, with weakened mental powers, but, with the influence of head-bathing and derivative means, such as cold hip-baths, he was able to resume his duties in the course of a few weeks, and has now efficiently pursued them for many years with perfect health.

Statesmen, and observers of every class in society, have been alarmed at the rapid increase of mental or brain diseases. Extensions have been required for accommodation in our asylums for individuals of all classes. The causes for this are not difficult to find in the present state of society.

The various forms of brain disease depend greatly on the constitutional tendencies of the individual, some being affected physically with apoplectic and paralytic tendencies ; others, with softening of the brain ; others, with spasmodic diseases, want of power, or control of some part or function of the body. Then there follows the large class of mental diseases in addition to defective organisation or imbecility.

The use of alcoholic and other liquors is well-known to

have an injurious effect on the red globules of the blood, and to tell chiefly on the brain and its functions, as we too frequently see in cases of intoxication. In vigorous constitutions, a plunge in cold water over the head may dissipate the alcohol, and by lung and skin emanations quickly expel the poison, and restore self-control ; but, as the full bath may not be attainable, free bathing of the head supplies the want in a great measure, and the habit of intoxication can be greatly overcome, and the injurious effects removed by this means. To those desirous of overcoming the dangerous habit of using stimulants, frequent and free bathing of the head will prove a blessing in giving strength to combat against the most deadly enemy of man in this generation.

The *Scotsman*, several years ago, gave an interesting account of one of the convivial wits of the last generation in Edinburgh, James Balfour, who frequently, after sitting drinking with some kindred spirits all night, might be seen attempting to run to his office in the morning, too tipsy to walk. The writer of the article remarked the surprise of Jamie's friends at his longevity, as he outlived all his boon companions by several years, and was able to conduct his business as a lawyer to old age ; but the secret of his retaining ability so long was revealed in the remark, that "Jamie had a strange habit of frequently bathing his head and hands in cold water," thus cooling and clearing his brain and steadying his hands.

*Life* is manifested in action, and instinctively seeks for an outlet in labour, activity, or social intercourse.

Want of healthful action and outdoor life weaken the constitution as a whole, but chiefly affect the brain and nerves.

The effects of such conditions are fearfully seen in times of excitement, among the masses or working-classes, who are in general depressed by confinement and monotonous labour.

But when excited by some general influence, they give way to violence, breaking down all restraints of society, and running to riot. Similar influences of repression of some of the spiritual qualities and enjoyments of humanity are the chief causes of so many seeking for relaxation, excitement, and pleasure in stimulants, tobacco, and other degrading pursuits of our lower nature or animal life. The various conditions of men, with limited scope for out-door life in what we may term this mental age, are innumerable, and call for attention to the effects on the brain and indirectly on the heart, the organs on which the strain is chiefly felt. I have frequently to warn young men against the habits and influences which dissipate life, in its possibilities of duration and happiness.

Young men, under the influence of a laudable desire for position, frequently enter into business with an amount of energy which absorbs every faculty, and unless some counter-acting affection awakens an interest in life's higher duties, they are apt to be drawn into the vortex of business or pleasure.

The consequences of this over-action are frequently to be seen in loss of health, position, and happiness, from neglecting the first important laws and duties of life as given by our Creator—Father—Friend,—that it is not good for man to be alone. A disregard to this truth (when circumstances are favourable), delaying marriage till some indefinite future arrives, when fortune or fame, if attained, may enable him to enjoy house and surroundings beyond his present position, has led to innumerable evils in society far beyond what the public dream of. Observation of the families and individuals within the range of our knowledge, tells us that success in life, the elements of happiness, estimation in character, and position in society, belong to that class who have chosen a life-companion at ages between twenty-five and thirty, and who *together* have fought life's battles, thus doubling their joys and modifying, by sharing, their sorrows.



Calm reflection on this subject will justify me in these strongly expressed views on this duty, which enters into and underlies the happiness of the individual and social life of the age. Head and heart must work in unison for a purpose ; and that purpose is the possession of health and happiness both in this life and that which is to come. God created both man and woman to be happy ; in intimate companionship throughout life ; but that is attainable only in obedience to his inflexible laws, written on and in our constitution and nature—physical, mental, and spiritual. The individual qualities of each are required, in a conjunction of both, for the happiness and usefulness of each other in life, in joy and sorrow, in health and in sickness, till death and beyond the grave.

“ Nature is industrious in adorning her dominions ; and man, to whom this beauty is addressed, should feel and obey the lesson. Let him, too, be industrious in adorning his house—in making his domain—the dwelling of his wife and children—not only convenient and comfortable, but pleasant. Let him, as far as circumstances will admit, be industrious in surrounding it with pleasant objects, in decorating it, within and without, with things that tend to make it agreeable and attractive. Let industry make home the abode of neatness and order—a place which brings satisfaction to every inmate, and which, in absence, draws back the heart by the fond associations of comfort and content. Let this be done, and this sacred spot will become more surely the scene of cheerfulness and peace.”

The earth is full of evidences of the goodness of God, but few materials or substances are ready for use, as only a few fruits are suitable food to begin with, and only caves to dwell in ; but man is endowed with abilities which grow with cultivation and use ; so that, by his intellect and the assistance of natural agencies easily procured, he can cultivate the ground, prepare food and clothing, and build houses with more and more perfection, until we see him as he now is, the lord of

creation, with all nature at his command, placed under his feet. But as yet his advance has been chiefly on the material and scientific plane, and his proper domain—the mental, social, and spiritual—has only of late been realised and acknowledged as the chief end of man's existence within his reach, and through which he can be made perfect. We read the Law as given by Jesus—To love our neighbour as ourselves—as if an unattainable suggestion. Yet it is the Law of Heaven, and only in learning and obeying this command is personal, social, and universal happiness possible. Those to whom God has given wisdom and power to civilise and instruct others, must labour and strive to teach and win the vicious, by restraining the tendency to evil, and cultivating the latent good that lies dormant within them. If this were earnestly pursued, society in circles, cities and countries would more speedily advance to a state of order and happiness.

Think of the change on this earth with cessation from war and violence. No police, prisons, armies, locks, or walls, with all the prohibitive, vindictive, and destructive agencies which at present exist abolished, from the least to the greatest,—*all* under the influence of love, and benevolence or charity, love in action ; our neighbour as ourselves !

Such a consummation, we do not doubt, *will* and *must* come. But what are the hindrances, and what will be the influences which can and will accomplish this object of the Creator—the Divine? It must be through the agency of man, into whose hands he has committed the obligation. Thou art the man, who reads and who writes. Every one is responsible to the extent of his influence and opportunity. The consummation is—Heaven.

## VI.

## EFFICACY OF HEAD BATHING IN THE PREVENTION AND CURE OF FEVERS.

My particular attention to this process in fevers, and from these to other diseases exhibiting similar symptoms affecting the Head, arose from reading a letter as to the experience of an old farmer who, being beyond the reach of the usual medical assistance, and having frequent cases of fevers among a large number of servants and others, in a malarious district where various forms of fever were prevalent, frequently followed by months of weakness after the fever had gone, as he supposed, from the effects of the drugs administered; but by observing the amount of *heat* accompanying the fever, or, as it were, the fever itself, the thought came into his mind to reduce or cure the fever by the cold bath.

For this purpose he took a large hogshead of cold water, into which he assisted the patient, causing him to dip entirely over the head several times; after which, being well rubbed dry and put to bed, he would generally perspire, and the fever symptoms soon disappear. But when the fever heat remained or reappeared he repeated the process for two or three days, always effecting a perfect and speedy cure. Finding the full plunge bath at times rather difficult, he thought of trying the effect of simply bathing the head alone, by dipping it repeatedly under water, when he found, to his surprise and delight, that thorough head washing and bathing was equally effectual in checking and curing fever in the first and second stages.

His experience in these means of cure extended over a period of thirty years, illustrating their efficacy of the means in invariably curing the disease and strengthening the constitution to resist future attacks or in acclimatising the individuals, to



suit the conditions of the locality or climate, in atmosphere, water, and food.

I feel as if the importance of this discovery can hardly be over-estimated.

Independently of being taken with some sort of fever, the first symptoms of which generally affect the head with uneasy sensations for several hours or days, there are many other forms of disease where the head first indicates danger in premonitory symptoms, and, judging from analogy, we may expect similar results to follow in preventing or curing other diseases also in the early stages, and *all* stages.

The brain and nerves seem to receive and realise the first influences of all our impressions, mental and physical; and through these and the perceptions of the mind and the senses, we are enabled to understand symptoms, and act with judgment and promptitude in avoiding and removing dangerous agencies within and without our organism.

Dr. Currie, of Liverpool, gave full accounts of his experience some eighty years ago, details of which were then published in the medical journals of the day.

Typhus fever had seized on a large proportion of a regiment. He at first picked out several on whom the symptoms were evident from the dull, heavy aspect and light pulse, etc., but not yet laid up in bed. These he marched down to the sea and gave them repeated plunges, as we say, over head and ears. Some required repetition for one or two days; but the means were efficacious. From malarious influences in the barracks, the whole regiment became more or less affected, which led to a purification and burning of old straw and other malarious substances; also cleansing and fumigating the barracks and temporarily changing to other quarters. But to check the fever in the men the whole body of them were marched to the sea and freely bathed, and fever speedily disappeared.

It is surprising how the teaching of these and many other high medical authorities is so soon neglected or forgotten.

How liable we are to disease from agencies known and unknown, from atmospheric and climatic changes ; and even our food and drinks, coming as they do from many sources and through unclean hands, in addition to dangers from our temptations to excess at times. But with the knowledge we now possess in purifying both food and drink and houses, in atmosphere and gases, and other means within the reach of almost all, and by a gentle sweat and wash, as preventatives and curatives, we may wonder at the amount of disease and death still devastating society around us.

Our knowledge is often of no effect from our indolence. To resist temptation or deny ourselves, and rouse up to do what we know, requires self-denial.

An elderly physician, of wide experience in a country district, gave me the following account of his own case. Returning from visiting a patient in virulent fever, he felt on himself all the first symptoms of the disease, and cast about in his mind how he might avert the threatened attack. By the roadside was a brook, cool and pleasant to eye and ear, and an intense desire for a bath then and there took possession of him. Finding a sheltered corner, he at once undressed and plunged into the refreshing waters, rolling and splashing about for several minutes, with so much benefit that he found the dangerous symptoms entirely removed, and was able to walk home without fatigue and thoroughly well.

Another physician gave me his experience under somewhat different conditions. Feeling certain that he had caught fever from his high and throbbing pulse, he considered how he might most speedily arrest the symptoms, and avert the danger of being laid up at a busy season. First, he freely washed and bathed his head ; then he took a deep cold hip-bath for an hour, watching the general febrile sensations subside, as the pulse fell

to its normal standard, while enjoying refreshment to the whole system. No return of the symptoms succeeded this effectual treatment ; and, indeed, we may see how all this class of diseases seems desirous to escape from the animal organism of humanity, as soon as they are within reach of water, into which they rush like the “evil spirits out of the man,” and perish in the waters—that is, their fire is quenched.

I have been much impressed with the principle involved in these experiences, and have kept it in view for upwards of twenty years, often averting disease and subduing dangerous symptoms by early application of similar means. But I feel anxious that those who are interested in the health and comfort of others should know how simple, yet efficacious, are the appliances ready to their hand, and requiring *only* attention, perseverance, and intelligent discrimination as to their application. I have used these means, also in prolonged attacks, of delirium and spasmodic twitching, or convulsions, by washing and pouring over the head for a whole hour, without intermission, repeating this treatment several times in a day for a week or longer ; with attention to conditions and with perseverance, we may give an assurance of success.

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## VII.

### EFFECTS ON THE BRAIN AND HEALTH FROM OVERWORK IN SCHOOLS.

(Extract from Letter in the “North British Daily Mail,” 1881.)

“The note of warning sounded in Germany against the excessive brain-work imposed on children at school, has been re-echoed pretty extensively at home. The London press have borne testimony to the interest and importance of the question. With ten years’ experience of the educational system presently



obtaining, the wonder is that the outcry, both loud and deep, has not long ere this succeeded in altering its ill-considered and too-exacting provisions. The requirements of the 'Code' have gone on extending in scope and increasing in difficulty year after year, until at length a point has been reached where it only wants the other proverbial straw to break the overburdened backs of our little patient scholastic camels. There is a limit to everything under the sun, and we are now beginning to find that the limit to the physical endurance and mental work of children has been reached, if not in many cases exceeded. Whence the excessive and long-drawn-out strain on our little folks, with its attendant chronic headache, stomachic ailments, general want of tone, induced anæmia, and other ills that juvenile flesh is now heir to, but which in other circumstances were rarely heard of? Has a new race of pedagogic Pestalozzis, Arnolds, and Stowes arisen, burning with a new-born zeal to make amends for the presumed defects of the old parochial schooling by forcing high pressure, in season, and also very much out of season, the brain-power of their pupils? Here are the 'specific subjects' for our little eleven-year-olds—Mathematics, English, Literature and Language, Latin, Greek, French, German, Mechanics, Chemistry, Animal Physiology, Physics, Physical Geography, Botany, and Domestic Economy. This would be rather a formidable array of items for folks out of their teens; how much more so for such as have not entered thereon. The system, in brief, is overstraining for the teacher, and cruelly and ruthlessly exacting on the taught."

The following paper was read, by Dr. Treichler, of Bad Lenk-Bern, upon the dangers of habitual headache, and of intellectual exertion of the exhausted brain, at the fifty-second meeting of Physicians, held at Baden-Baden:—

"School Hygiene, the youngest stepchild of Medicine, has, till now only sought to ward off bodily mischief; yet, as school

is chiefly concerned with brain activity, it is very probable that a rich material lies here before psychology and psychiatry, and a wide field of work in watching over it, and raising their warning voice, that the activity and exertion of the brain be normal, and that it be not allowed to become the cause of serious illness in latter life. Learned men have been very egotistical in this respect ; they observe the mischief in their own and other people's children, but they are so engrossed by their own special studies and callings that they allow the health of these young people to suffer irreparable harm ; and this is especially to be lamented in the case of young women, who are far more heavily weighted than men by the restrictions of fashion and prejudice. According to my experience, habitual headache has considerably increased with boys and girls. It destroys much of the happiness and cheerfulness of life, produces anæmia and want of intellectual tone, and it reduces many a highly-gifted and poetic soul to the level of a discontented drudge. Physicians and psychologists have paid far too little attention to this affection as well as to school hygiene, and it would be a good work to inaugurate a change in this respect. It is difficult to collect precise data on habitual headache, yet the result of various investigations at Darmstadt, Paris, and Nouenbourg, goes to prove that one-third of the pupils suffer from it. Undoubtedly, the principal cause is intellectual over-exertion, entailing work at night, and the too earnest taking up of a variety of subjects—music among the rest. The pathological changes in the worst cases of this unhealthy condition I consider to be a disturbance created by anæmia in the nutrition of the ganglion cells of the cerebrum. It is well known that a badly-nourished brain is much more quickly fatigued by intellectual exertion than a brain in normal condition, just as is the case with the muscles. A second cause of a habitual headache is a dilatation of the blood-vessels of the brain, also connected with serious disturb-

ances of nutrition, whereby the capillary vessels are contracted, and the getting rid of used-up matter greatly impeded. Modern pathology now looks on progressive paralysis in its earliest stage, as a disturbance of nutrition of the cerebrum, in which the vessels of pia-mater get into a palsied condition, and we have degeneration of the brain. In this pathological definition of the two diseases, it is plain that they have a resemblance and affinity to each other, and that physicians ought by no means to ignore them. In habitual headache, the palsied condition of the brain-vessels is transitory ; in progressive paralysis, it is usually irreparable. A second great evil in the more advanced schools, consists in intellectual overloading of the pupils, and in their being compelled to take up too many subjects ; also in working on at night, when thoroughly exhausted. This must produce the same condition in the brain as would be produced in the muscles, if, after a long day's march, a mountain climber were to continue walking far on into the night, and were to repeat this day after day. I might here prove that the method of instruction now-a-days is not only a cause of disease, but also perfectly useless, because instead of increasing knowledge, it produces mental confusion. and becomes simply a labour of the Danaides, or like carrying water in a sieve. As I believe psychology can prove the correctness of what has been here said, if we consider the experiences given us by men who have suffered from senile brain atrophy, and also that, in giving a rational amount of time to work, and to the exercise of thought and memory, the gain for the pupil will be far greater than that attained by the present method. What we call thought and impression made on the memory are undoubtedly processes of molecular motion in the protoplasm of the intellectual brain cells, although it still remains a riddle how such process of motion is in us transformed into thought. When these ganglionic cells begin to be diseased, the memories and scientific problems of *youth* are



still clear, and can be reproduced ; while the same cells can no longer comprehend and work at *new* though much simpler scientific problems, and while with regard to a thing of *yesterday* the memory is uncertain. From this we may draw the following conclusions :—1. That what the ganglion cells, when in their full health and vigour, have grasped remains ; so that, after the lapse of half-a-century, and with the beginning of disease it may still be reproduced. 2. That the ganglion cells diseased by old age, are, in reference to the accomplishment of work, like greatly exhausted ones, and have lost the power of understanding and *abidingly* taking in *new* ideas. The ganglion cells, therefore, can only take in new ideas, as an intellectual acquisition, so long as they are powerful, are not exhausted, and are nourished with healthy blood. The boundary line is drawn here quite as exactly as is the question of nourishment for the stomach of an invalid. 3. That the constant addition of fresh subjects in the teaching programme, making night-work necessary for the pupil when already exhausted, entirely defeats its object of enriching the intellect, because new ideas cannot be really grasped, and confusion is produced as to what has been learnt in the day. The great object of the school, therefore—earnest, intellectual discipline, and the desire for continuous cultivation of the mind—is frustrated. Confusion in the intellectual powers of an overwrought pupil and his final gain, must be the same as that which would occur in a counting-house where there were only means for the despatch of 100 letters a-day, the daily number requiring attention being from 130 to 150. Confusion in business and decreased gains would be the result.”

Dr. Douglas Fox writes :—“ I have read with much interest the remarks upon Dr. Treichler’s paper, read at Baden-Baden, on school hygiene. Among the very valuable statements he makes relative to the overworking of the brain of children I do not find one very important matter alluded to—namely,

that frequently growing children become dull and stupid when engaged in their daily lessons without any very obvious cause. During a long medical practice such cases frequently came under my care. When dulness arose in children generally industrious I always advised that the brain should not be employed in severe study, but chiefly in mere perceptive work, so as to keep the child lightly occupied. This I did from observing that such states of dulness in intelligent children were in a moderate time followed by visible growth of the whole frame, when the dulness in most cases disappeared. From these cases I came to the conclusion that the brain had been increasing in size more rapidly than the increased capacity of the skull, causing compression. I found great benefit to arise from allowing a suitable time to elapse till the balance between the size of the brain and skull was established. I also saw fearful injury, of a permanent character, arise where the brain was pressed to perform work it was unable to accomplish with moderate ease."

Dr. Farquharson, of Rugby, considers that mental strain is more common at the universities, "for the young men are at a more sensitive period of life, they feel that this is the great opportunity—the great crisis of their existence—and that success or failure will effectually make or mar their career. Anxiety comes into play, sleep is disturbed, exercise neglected, digestion suffers, and the inevitable result follows of total collapse, from which recovery is slow and perhaps never complete."—(*Lancet*, Jan. 1, 1876.) He has seen an increase of headaches and nervous complaints among poor children since compulsory attendance at Board Schools was adopted, and warns against too suddenly forcing the minds of feeble, ill-fed and ill-housed children, and against attempts to make bricks without straw.

As we write, four cases come to our knowledge of girls seriously injured by this folly. In one, the brain is utterly unable

to bear the burden put upon it, and the pupil is removed from school in a highly excitable state ; in another, epileptic fits have followed the host of subjects pressed upon the scholar ; in the third, the symptoms of brain fog have become so obvious that the amount of schooling has been greatly reduced ; and in a fourth, fits have been induced and complete prostration of brain has followed. These cases are familiar to most physicians. The enormous number of subjects which are forced into the curriculum of some schools and are required by some professional examinations, confuse and distract the mind, and by lowering its healthy tone often unfit it for the world. Insanity may result from this stuffing ; exciting causes occurring in later life may upset a brain, which, had it been subjected to more moderate pressure, would have escaped unscathed. Training in its highest sense is forgotten in the multiplicity of subjects, originality is stunted and individual thirst for knowledge ungratified. Mr. Brudenell Carter, in his "Influence of Education and Training in Preventing Disease of the Nervous System," speaks of a large public school in London, from which boys of ten to twelve years of age carry home tasks which would occupy them till near midnight, and of which the rules and laws of study are so arranged as to preclude the possibility of sufficient recreation. The teacher in a High School says that the host of subjects on which parents insist instruction being given to their children is simply preposterous, and disastrous alike to health and to real progress in necessary branches of knowledge. An examiner, with a roll of papers consisting of answers to questions, deplored the fashion of the day in the number of subjects crammed within a few years of growing life ; the character of the questions which were frequently asked ; and a student requiring to master, at the peril of being rejected, scientific theories and crude speculations, which they would have to unlearn in a year or two. During the last year or two the public have been startled



by the suicides which have occurred on the part of young men preparing for examination at the University of London ; and the press has spoken out strongly on the subject. Notwithstanding this, the authorities appear to be disposed to increase instead of diminish the stringency of the examinations. The *Lancet* has recently protested against this course in regard to the preliminary scientific M.B. of the London University, and points out that the average of candidates who fail at this examination is already about forty per cent., and that these include many of the best students.

The master of a private school informs us that he has proof of the ill effects of over-work in the fact of boys being withdrawn from the keen competition of a public school, which was injurious to their health, and sent to him that they might pick up health and strength again. He refers to boys who had been crammed and pressed that they might enter a certain form or gain a desired exhibition, having reached the goal successfully, and then stagnated. Excessive activity and excessive dulness may lead to the same dire result ; both must be recognised as causes of mental disease.

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### CURE FOR SLEEPLESSNESS.

WET half a towel, apply it to the back of the neck, pressing it upwards towards the base of the brain, and fasten the dry half of the towel over so as to prevent the too rapid exhalation. The effect is prompt and charming, cooling the brain, and introducing calmer, sweeter sleep than any narcotic. To those suffering from over excitement of the brain, whether from work or anxiety, this simple remedy is a boon. Washing the whole head first makes the application more efficacious.

## TO ATTAIN LONG LIFE.

HE who strives after a long and pleasant term of life must seek to attain equanimity, and carefully to avoid all influences which too violently tax the feelings. Nothing more quickly consumes the vigour of life than violent emotions of the mind. We know that anxiety and care can destroy the healthiest body ; we know that fright and fear, even excess of joy, become deadly. They who are naturally cool and of a quiet turn of mind, upon whom nothing can make too powerful impressions, who are not excited by great sorrow or over-joy, have the best chance of living long and happily. Preserve, therefore, under all circumstances, a composure of mind which neither happiness nor misfortune can too much disturb. Love not violently, hate not passionately, fear not too strongly, in life or death.

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## DANGERS UNDER CHLOROFORM TO THE BRAIN.

AFFECTING the Head I began to be terrified to such a wonderful extent as I would never before have guessed possible. I made an involuntary effort to get out of the chair, and then—suddenly became aware that I was looking at nothing ; while taken up by the confusion in my lungs, the outward things in the room had gone, and I was “alone in the dark.” I felt a force on my arm (which did not strike me as the surgeon’s “hand,” but merely an external restraint) keeping me down, and this was the last straw which made me give in, the last definite thing (smell, sound, or touch) I remembered outside my own body. Instantly I was seized and overwhelmed by the panic inside. I could feel every air-cell struggling spasmodically against an awful pressure. In their struggle they seemed to tear away from one another in all directions, and

there was universal racking torture, while meantime the common foe, in the shape of this iron pressure, kept settling down with more and more irresistible might into every nook and crevice of the scene. My consciousness was now about this : I was not aware of anything but an isolated scene of torture, pervaded by a hitherto unknown sense of terror (and by what I have since learned is called "the unity of consciousness;" this never deserted the scene, even down to the very last inaudible heart-beat). Yet I call it a "scene," because I recognised some different parts of my body, and felt that the pain in one part was not the same as that in another. Meanwhile, along with the increased intensity of convulsion in my lungs, an element of noise had sprung up. A chaotic roaring ran through my brain, innumerable drums began to beat far inside my ear, until the confusion presently came to a monstrous thudding, every thud of the heart which wounded me like a club falling repeatedly on the same spot.—H. S., in *Popular Science*.

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## PREACHING AND PRACTICE.

AT a medical conversazione, held after dinner, around the hospitable board of Sir William Jenkins, attention was called to an appeal to the Faculty by a daily journal, in an article on "The Perils of Fashionable Life," those besetting "the fashionable dissipation of a London season" with its resultant evils; the damage done to the system by the giddy whirl of pleasures, late hours, constant excitement, over-heated and ill-ventilated rooms, exposure to sudden changes of temperature, want of sleep, imprudent indulgence in stimulants—against all which medical men were invited to protest more emphatically and generally than they do—the invitation being especially



addressed to "the majority of the busiest practitioners in the West End," who were urged "to steadily discountenance" those fast and foolish courses.

Dr. Guineaman said the article in question was quoted and endorsed in a professional journal, which admitted that they (the Faculty) "had not taken the subject up as they ought to have done. Public hygiene had monopolised too much of their attention, to the neglect of private hygiene ; and they had witnessed with too much indifference those social abuses and irregularities to which many of the disorders among the higher classes are to be chiefly attributed." Very likely. Their attention to public hygiene has vastly improved the public health. The same consequence, no doubt, would result from equal attention to private hygiene. Yes ; but how would that affect private practice ?

Dr. Pursey.—Fancy the effect, in a business point of view, of successful remonstrance against those unhealthy habits, which, as we know, produce nearly all the disorders prevalent among the higher classes. How could doctors live if there were no diseases ? That would be the necessary consequence of thorough attention to public hygiene, and private hygiene, too.

Sir Cute Sharples.—The profession are called upon to preach obedience to the laws of health. Preaching is the province of the Clergy. But as to that, the cure of bodies differs materially from the cure of souls. If the souls are cured by it, so much the better both for the souls and the sermoniser. The Parson gets paid all the same. But the Physician's exhortations, in so far as they are effectual, impair his income.

Mr. Abernethy Jones.—True ; but they are effectual in very few cases indeed. I speak from experience. My patients all belong to the better orders, so called—those that 'Arry styles the "Upper Ten." I never cease pointing out to them the error and stupidity of their ways in respect of eating and drinking, late hours in heated rooms, impure air, and all the rest of

it. What is the consequence? They give me great credit, but, for the most part, pay me not the slightest attention. My practice is never at all the worse for my preaching. In the meantime—*liberavi animam meam*—and I combine the enjoyment of an undiminished income, with the satisfaction of a self-approving conscience.

[Roars of laughter, during which the host called upon the speaker to pass the bottle, and the conversation concluded.]—*Punch*.

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### A CORRECTIVE FOR COLD FEET.

A FREQUENT cause of headache is the habit of wearing tight-fitting boots and shoes, particularly in youth. Ease and freedom to the feet is important in all ages, especially in youth and age. It would be of immense advantage to society if exercise with barefeet was taken by all classes in the country during summer, or in mild or even damp weather. At the coast or country, walking on the shore, or the road or fields, would be highly enjoyed by the young, and materially assist in checking the prevalence of headaches, colds, sore throats, and chest complaints generally. The sole of the foot was *intended* to be worn, and every action or process which increases circulation in the limbs and feet is beneficial to the health and integrity of the individual as a whole. Barefoot exercise, especially on rough and moist surfaces, is the best preventive of cold feet, chilblains, and corns, in addition to protection so far against head and chest ailments. In connection with the causes of cold feet, it will suit well here as a *finale* to the whole. Having begun with the Head we end with the Feet.